

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A photomultiplier comprising a plurality of dynodes arranged in cascade so that the second and any subsequent dynodes each receive electrons from the preceding dynode, the dynodes being of curvilinear cross-section and arcuate in extent about a common axis, successive dynodes being disposed so that the cascade extends radially relative to said axis.

2. (Original) A photomultiplier as claimed in Claim 1 wherein successive dynodes are disposed successively radially outwardly of each other, or successively radially inwardly of each other, relative to said axis.

3. (Original) A photomultiplier as claimed in Claim 1, wherein a said curvilinear cross-section comprises an arcuate portion and a straight portion extending tangentially therefrom, or a part-elliptical portion or a spiral portion.

4. (Original) A photomultiplier as claimed in Claim 1, wherein the dynodes are annular or part-annular or segmented.

5. (Original) A photomultiplier as claimed in Claim 3, wherein the dynodes are annular or segmented, and wherein the curvilinear cross-sections of the dynodes are sections through a set of toroidal surfaces having a common principal axis of rotation each intersected by one of a set of conical surfaces

coaxial with the principal axis of rotation of the toroidal surfaces.

6. (Original) A photomultiplier as claimed in Claim 1, wherein the effective area of each of at least some of the dynodes is greater than that of the preceding one.

7. (Original) A photomultiplier as claimed in Claim 1 wherein the effective area of each of at least some of the dynodes is less than that of the preceding one.

8. (Original) A photomultiplier as claimed in Claim 1, wherein the effective area of the dynodes changes linearly from dynode to dynode.

9. (Currently amended) A photomultiplier as claimed in Claim 1, wherein the dynodes are arranged in two coaxial substantially planar substantially disc-like shaped arrays arranged parallel to and facing each other.

10. (Original) A photomultiplier as claimed in Claim 1, wherein at least alternate dynodes are spaced from each other successively along said axis.

11. (Original) A photomultiplier as claimed in Claim 10 wherein successive dynodes are alternately disposed on coaxial male and female generally conical surfaces.

12. (Currently amended) A photomultiplier as claimed in Claim 924, wherein at least one of the dynode arrays forms part of the vacuum envelope of the device.

13. (Original) A photomultiplier as claimed in Claim 1, comprising an annular part annular or segmented anode for receiving electrons from the last dynode.

14. (Currently amended) A photomultiplier as claimed in Claim 924, comprising an annular part annular or segmented anode for receiving electrons from the last dynode, and wherein the anode is disposed between the dynode arrays.

15. (Original) A photomultiplier as claimed in Claim 13, wherein the support structure of the anode is of thin section whereby to reduce anode capacitance.

16. (Original) A photomultiplier as claimed in Claim 1, wherein a plurality of the dynodes are respective layers of a secondary emissive material deposited directly or indirectly on shaped surfaces of a common substrate of insulating material.

17. (Withdrawn) A dynode assembly for a photomultiplier or other electron multiplying device comprising at least two dynodes electrically isolated from each other, the dynodes comprising discrete layers of secondary emissive material on shaped surfaces of a common substrate of insulating material.

18. (Withdrawn) A photomultiplier or a dynode assembly as claimed in Claim 16 or Claim 17 wherein the substrate is machined, cast, sintered or otherwise of moulded construction.

19. (Withdrawn) A photomultiplier or a dynode assembly as claimed in Claim 17, wherein the secondary emissive layers are deposited on a conductive underlayer.

20. (Withdrawn) A photomultiplier or a dynode assembly as claimed in Claim 19 wherein the conductive underlayer of a said dynode is extended as a conductive track to form an electrical connection for the dynode.

21. (Withdrawn) A photomultiplier or a dynode assembly as claimed in Claim 17, wherein an electrical connector to a said dynode is embedded in the insulating substrate.

22. (Withdrawn) A photomultiplier or other electron multiplying device comprising a dynode assembly as claimed in Claim 17.

23. (New) A photomultiplier comprising a plurality of dynodes arranged in cascade so that the second and any subsequent dynodes each receive electrons from the preceding dynode, the dynodes being of curvilinear cross-section and arcuate in extent about a common axis, successive dynodes being disposed so that the cascade extends radially relative to said axis, wherein a said curvilinear cross-section comprises an arcuate portion and a straight portion extending tangentially therefrom, or a part-elliptical portion or a spiral portion, wherein the dynodes are annular or part annular or segmented, and wherein the curvilinear cross-sections of the dynodes are sections through a set of toroidal surfaces having a common principal axis of rotation each intersected by one of a set of conical surfaces coaxial with the principal axis of rotation of the toroidal surfaces.

24. (New) A photomultiplier comprising a plurality of dynodes arranged in cascade so that the second and any

subsequent dynodes each receive electrons from the preceding dynode, the dynodes being of curvilinear cross-section and arcuate in extent about a common axis, successive dynodes being disposed so that the cascade extends radially relative to said axis, wherein the dynodes are arranged in two coaxial substantially planar substantially disc-shaped arrays arranged parallel to and facing each other.

25. (New) A photomultiplier comprising a plurality of dynodes arranged in cascade so that the second and any subsequent dynodes each receive electrons from the preceding dynode, the dynodes being of curvilinear cross-section and arcuate in extent about a common axis, successive dynodes being disposed so that the cascade extends radially relative to said axis, wherein at least alternate dynodes are spaced from each other successively along said axis, and wherein successive dynodes are alternately disposed on coaxial male and female generally conical surfaces.